WHAT IS CLAIMED IS:

1. A process for transalkylation of aromatics comprising contacting a feed stream comprising naphthalene and C_{11} aromatics with a catalyst at transalkylation conditions to produce a product stream comprising C_8 aromatics, the catalyst comprising a solid-acid support material and a metal component selected from the group consisting of platinum, palladium, nickel, tin, lead, iridium, germanium, rhenium, or a combination thereof.

2. The process of claim 1 wherein the solid-acid support material is selected from the group consisting of mordenite, mazzite, zeolite beta, ZSM-11, ZSM-12, ZSM-22, ZSM-23, MFI topology zeolite, NES topology zeolite, EU-1, MAPO-36, MAPSO-31, SAPO-5, SAPO-11, SAPO-41, and silica-alumina and mixtures thereof.

3. The process of claim 2 wherein the solid-acid support material is selected from the group consisting of mordenite, zeolite beta, MFI topology zeolite, silica-alumina and mixtures thereof.

4. The process of claim 3 wherein the solid-acid support material is mordenite and the metal component is selected from the group consisting of platinum, tin, and rhenium.

5. The process of claim 1 wherein the feed stream and product stream are further characterized by having an ending-boiling-point of 99.5 wt-% as determined by the D2887 simulated distillation GC method, and said product stream ending-boiling-point is less than said feed stream ending-boiling-point by at least about 5°C.

6. The process of claim 5 wherein the product stream ending-boiling-point is less than the feed stream ending-boiling-point by at least about 10°C.

7. The process of claim 1 wherein the feed stream naphthalene content is at least about 0.3 wt-%.

8. The process of claim 7 wherein the feed stream naphthalene content is at least about 0.5 wt-%.

9. The process of claim 7 wherein the conversion of feed stream naphthalene is at least about 80 wt-% calculated on a fresh feed basis.

10. The process of claim 1 wherein the transalkylation conditions comprise a temperature from about 200° to about 540°C, a pressure from about 100 kPa to about 6 MPa absolute, and a space velocity from about 0.1 to about 20 hr^{-1}.

11. The process of claim 1 wherein the catalyst further comprises an inorganic oxide binder.

12. A process for transalkylation of aromatics comprising contacting a feed stream comprising a substantial amount of indane and naphthalene with a catalyst at transalkylation conditions to produce a product stream comprising C_8 aromatics, the catalyst comprising an inorganic oxide binder, a solid-acid material selected from the group consisting of mordenite, mazzite, zeolite beta, ZSM-11, ZSM-12, ZSM-22, ZSM-23, MFI topology zeolite, NES topology zeolite, EU-1, MAPO-36, MAPSO-31, SAPO-5, SAPO-11, SAPO-41, and silica-alumina and mixtures thereof, and a metal component; wherein the product stream ending-boiling-point of 99.5 wt-%, as determined by the D2887 simulated distillation GC method, is less than the feed stream ending-boiling-point by at least about 5°C.

13. The process of claim 12 wherein the feed stream indane content is at least about 0.3 wt-%.

14. The process of claim 13 wherein the feed stream indane content is at least about 0.5 wt-%.

15. The process of claim 12 wherein the metal component is selected from the group consisting of platinum, palladium, nickel, tin, lead, iridium, germanium, rhenium, or a combination thereof.

16. The process of claim 15 wherein the solid-acid material is mordenite and the metal component is rhenium present in an amount about 0.01 to about 2 wt-%.

17. The process of claim 12 wherein the transalkylation conditions comprise a temperature from about 200° to about 540°C, a pressure from about 100 kPa to about 6 MPa absolute, and a space velocity from about 0.1 to about 20 hr^{-1}.

18. The process of claim 12 wherein the conversion of feed stream indane is at least about 50 wt-% calculated on a fresh feed basis.

19. The process of claim 18 wherein the conversion of feed stream indane is at least about 75 wt-% calculated on a fresh feed basis.

20. The process of claim 12 wherein the conversion of feed stream naphthalene is at least about 80 wt-% calculated on a fresh feed basis.

21. A process for transalkylation of aromatics comprising contacting a feed stream comprising substantial amounts of indane, naphthalene, and C_{11} aromatics with a catalyst at transalkylation conditions comprising a temperature from about 200° to about 540°C, a pressure from about 100 kPa to about 6 MPa absolute, and a space velocity from about

0.1 to about 20 hr^{-1} to produce a product stream comprising C_8 aromatics, the catalyst comprising an inorganic oxide binder, a solid-acid material selected from the group consisting of mordenite, mazzite, zeolite beta, ZSM-11, ZSM-12, ZSM-22, ZSM-23, MFI topology zeolite, NES topology zeolite, EU-1, MAPO-36, MAPSO-31, SAPO-5, SAPO-11, SAPO-41, and silica-alumina and mixtures thereof, and a metal component selected from the group consisting of platinum, palladium, nickel, tin, lead, iridium, germanium, rhenium, or a combination thereof; wherein the product stream ending-boiling-point of 99.5 wt-% as determined by the D2887 simulated distillation GC method is less than the feed stream ending-boiling-point by at least about 5°C, the conversion of feed stream naphthalene is at least about 80 wt-% calculated on a fresh feed basis, and the conversion of feed stream indane is at least about 50 wt-% calculated on a fresh feed basis .

22. The process of claim 21 wherein the total amount of indane and naphthalene is greater than about 0.5 wt-%.

23. The process of claim 21 wherein the conversion of feed stream indane is at least about 75 wt-% calculated on a fresh feed basis.

24. The process of claim 21 wherein the feed stream further comprises methylnaphthalene, and conversion of the feed stream methylnaphthalene is at least about 50 wt-% calculated on a fresh feed basis.

25. The process of claim 21 wherein the product stream ending-boiling-point is less than the feed stream ending-boiling-point by at least about 10°C.